

a rectifier for rectifying said AC input voltage from said AC power supply to produce a rectified bus voltage;

A an inverter for converting said rectified bus voltage to a high-frequency AC drive voltage to drive said lamp; and

current drawing means coupled to receive said rectified bus voltage for selectively drawing current from said AC power supply so that the input current to said ballast is essentially sinusoidal; said current drawing means including a cat ear power supply.

1 Please, cancel claim 2.

Replace claim 3 with:

12 3. The electronic ballast according to claim 1 wherein said cat ear power supply includes means for drawing current from said AC power supply when said AC input voltage waveform is less than a predetermined value.

(Replace claim 4 with: }

4. The electronic ballast according to claim 1 wherein said cat ear power supply includes means for drawing current from said AC power supply when the current drawn by said inverter from is substantially zero.

(Replace claim 5 with: }

5. An electronic ballast for driving a gas discharge lamp, the ballast having improved input current total harmonic distortion (THD), the ballast comprising:

a rectifier for rectifying an AC input voltage from an AC power supply to produce a rectified bus voltage;

an inverter for converting the rectified bus voltage to a high-frequency AC output voltage to drive said lamp; and

means for drawing current from the AC power supply near the zero crossing of the

12 AC input voltage so that the input current THD is substantially reduced; said means for drawing current including a cat ear power supply.

{ Replace claim 6 with: }

6. The electronic ballast according to claim 5 further comprising a control circuit connected to drive said inverter; and

wherein said cat ear power supply supplies power to operate said control circuit.

Replace claim 9 with:

13 9. An electronic ballast for driving a gas discharge lamp, the ballast having improved power factor and total harmonic distortion, the ballast comprising:

a rectifier for rectifying an AC input voltage from an AC power supply to produce a rectified bus voltage;

a valley-fill circuit having an energy storage device, said valley-fill circuit electrically coupled to receive said rectified bus voltage;

an inverter for converting said rectified bus voltage to a high-frequency AC output voltage to drive said lamp; and

energy delivery control means for controlling the delivery of energy to said energy storage device over a substantial portion of each half-cycle of the AC input voltage so that the ballast power factor and THD are substantially improved; said energy delivery control means including a buck inductor.

Please, cancel claim 10.